

Abstract^A of the Disclosure

A system for exhaust gas purification includes at least one adsorbent capable of adsorbing harmful substances such as hydrocarbons and the like in exhaust gas and at least one catalyst containing a catalyst component, capable of reducing said harmful substances, both provided at an in-line position of exhaust pipe of internal combustion engine. In the system, the hydrocarbons, etc. in the exhaust gas emitted during cold engine start up of internal combustion engine are adsorbed by the adsorbent and the adsorbed hydrocarbons, etc. are desorbed from the adsorbent with the temperature rise of the adsorbent caused by the heat of the exhaust gas and are burnt on the catalyst. The adsorbent contains a H type β -zeolite having a $\text{SiO}_2/\text{Al}_2\text{O}_3$ ratio of 100 or more and can maintain good adsorption capability even when exposed to an exhaust gas of 750°C or more from an internal combustion engine. This system for exhaust gas purification can effectively purify harmful substances in exhaust gas, particularly the hydrocarbons, etc. emitted in large amounts during cold engine start up.